Drought AND Flood?
Workshops, Conferences of interest
Amateur Weather Spotters sought

Welcome to flood season. Time's flown, and here we are in mid-October, the traditional start to flood season. Generally, the flood season is considered to be October 15 through the following April 15. But each year can have its own high water concern period. This year we don't have an early start, with reservoirs so low. Weather/hydrology briefings from the Joint Operations Center have not yet gotten underway.
But for those agencies that would like access again this year, you will need to request anew. There is a new web location to get the current and archived briefings. Please contact the Department of Water Resources Flood Center with your agencies' interest. These are restricted access.

Email: wx_webcast-request@water.ca.gov

or Call: Flood Operations Center at (916) 574-2619

There is a bit of an update on the fall forecast. Trends are now toward the possibility of a wet fall. Several weeks ago, there was very limited information as to the long-range outlook. And while nothing substantial has transpired, there are indications that a bigger player in this winter's scenario will be the Madden-Julian Oscillation.

The MJO is a weather phenomenon that has some pretty clear signals, so forecasters can get an idea of its development with an advance time of 30-60 days. Beginning in the Indian Ocean, enhanced convection begins and moves eastward across the Pacific. The MJO essentially produces warm, wet storms, with boosts from both the tropics and the colder Arctic air.

There is only a lead time of a few days for determining where along the west coast these warm, wet MJO storms will hit. Some may not even turn into big low pressure cells, but those that do can strike anywhere from the Pacific Northwest, to Southern California. So pay attention to where they seem to be tracking. And when they do come onshore, they can produce rather heavy downpours. Historically, Bay Area flooding in December, 2003 and Southern California flooding in February, 2004 were of the MJO under ENSO neutral conditions variety. According to the CPC, we are in a La Nada (ENSO Neutral; neither El Nino nor La Nina), or maybe a slightly cool, weak La Nina, which had been very strong last year.

Biggest risk, for now, will be burn areas. With multiple sites from record wildfires up and down the state, debris flow and flash flooding might be triggered.

The National Weather Service Sacramento Office is discussing the potential of a wet fall, and for these types of storms to develop in November. Both the north and south state could be impacted by MJO type storms. Balance all these forecast indicators against the nearly La

Nada indicator, which doesn't provide strong guidance for either a wetter or drier than normal winter. It's a hard thing to forecast a whole winter. But they say there may be hopes of a normal to wetter than normal Northern Sierra winter. Southern California could have a dry year, but the MJO is a possibility there, too. So, very hard forecast.

The picture for this season also includes great capacity in our reservoirs for incoming rain, so that's one upside of 2 dry years. Many of the larger upstate reservoirs are at about one-third capacity, so mainstem river flooding would be something much slower to develop.

How does the State's reservoir storage stack up against recent dry spells? Well, right now the statewide storage is about 73% of average. By the end of the 2nd year in recent droughts; in 1977, statewide reservoir storage was at horrendous 35% of average on October 1. And after the 2nd dry year in the '87-'92 period, storage was at 68% of average. It's not quite as bad today as it was by those end-of-2nd-dry-year levels, but we are in very low territory. Shasta is at 30% of capacity, for example. That is by far the largest reservoir, holding 4.5 million acre feet of water.

With a growing population, and Delta issues, drought will be an ongoing concern, even if we have a wet fall or normal year. For example, it would take a big year, in the top 5% of historical runoff years to put our reservoirs back to traditional storage levels. We would stay the same if we had about a 70% normal runoff year. We do need some good rain, over at least the next season, probably 2 or 3 to bounce back. But there have been years we've popped up out of dry conditions like we are in now; such as 1978. Shasta roared back to full reservoir storage within 6 months after the drought of '76-'77. It really is a matter of waiting to see what happens. If the patterns change again, dry conditions could intensify this year, with more supply demands and restrictions than during previous droughts, making it essential that we conserve water.

Could Oroville reach a record low this year? Some of you may have seen pictures of, or driven by Lake Oroville. For a dramatic recent photo, head to the DWR drought page, about half way down:

http://www.water.ca.gov/drought/

The record low for Oroville is 645 feet elevation, 882 thousand acre feet (TAF), set on 9/8/77. Current storage is 676.33 feet, 1,082,951 (1.08 MAF). If we have a VERY dry fall, Oroville could come within 4 feet of the record low by December 31, 2008. But a more reasonable precipitation pattern would put it at about 20 feet above the record. Even if we don't set a record, these are very strikingly bad numbers, to be within a handful of feet of record low. We'll see how much it does rain in November!

Since the new water season started October 1, there are some raindrops in the gauge. That first weekend there was goodly precip. Here are the current water year totals, and approximate percent of average for the
season:

Eureka	1.43"	64%	
San Francisco	0.16"	25%	
Sacramento	0.25"	32%	
Weaverville	1.77"	128%	
Caples Lake	1.44"	119%	
8 Station Northern Sierra	2.10"	70%	(Normal Oct. is 3.0")
Palm Springs	0.96"	91%	

New this season will be a 5-Station Southern Sierra Precipitation Index.
A climatological record of these long-term gauges is being created, and from time to time the 5-Station SSPI will be covered this winter, in addition to the 8 Station Northern Sierra Index. The long-term locations chosen for representing the San Joaquin System are Calaveras Big Trees, Huntington, Hetch Hetchy, North Fork Ranger Station, Yosemite Headquarters. This will be a nice addition to our data products.

A series of Pre-Season Flood Meetings have been held in recent weeks, to prepare for the winter season: Ventura (Sept. 16th), Riverside (Sept.17th), San Diego (Sept. 18th), Red Bluff (Oct. 8th), Yuba City (Oct. 9th), Sacramento (Oct. 15th), and Stockton (Oct. 16th). There will be one in Eureka, at the City Council Office, in coordination with the Eureka Flood Center from 9am - noon, December 4th, 2008. For more information, or materials relating to these briefings, please go to the Announcements section on CDEC's home page.

http://cdec.water.ca.gov/

Drought Preparedness and Conditions workshops will take place on October 21, in San Diego, and on October 28, in Riverside. Urban Drought Workshops will occur on October 22 in Concord, and on October 29 in Sacramento. For more information on these meetings, please go to:
http://www.water.ca.gov/
and click on All Recent News.

Volunteers Sought for Rain Gauge Program

State Climatologist Michael Anderson is encouraging California residents to participate in a volunteer program to measure precipitation.
Rainfall captured in backyard rain gauges will be logged on an internet-based weather network known as CoCoRaHS, the Community Collaborative Rain, Hail, and Snow Network. Home-based and amateur rain spotters take daily rainfall measurements and report them to the CoCoRaHS website, http://www.cocorahs.org

Each volunteer is asked to read the rain gauge each day at the same time and upload the measurement to the website. The result is more precise information about where rain, snow and hail falls and in what amount.
Anyone with an interest in weather and access to the Internet can sign up. The only equipment needed is a cylindrical rain gauge available

from the network for $23 plus shipping. Simple training is available on the same site.

Funding for these valuable observations is tough to come by. To really get an accurate record of weather and climate change, these measurements are critical. Thank you for volunteering!

DWR's Weather and Climate Newsletters are available on-line, and archived at:

http://cdec.water.ca.gov/weather.html

Look for another issuance in November.

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